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PLANNING *for* WEST BENGAL

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PREFACE

'THE most vital and urgent of India's problems, declared the Congress Election Manifesto, 1946/47, 'is how to remove the curse of poverty and raise the standard of the masses. It is by their well-being and advancement that the Congress has judged every proposal and every change and it has declared that anything that comes in the way of the good of the masses of our country, must be removed.' The task of the West Bengal Government, as of any other Congress Government, must be to tackle this fundamental problem of poverty. This entails, first, the formulation of targets and, secondly, the formation of a plan for the achievement of those targets. The second aspect is primarily dependent on the first and in the following pages we have tried to make an estimate, in concrete terms, of our requirements. We have based our calculations on a total population of 24 million. Though calculations of requirement should generally have been made on the basis of *adult* population, yet we have worked on the basis of total present population because we have ignored the population growth that will take place during the period necessary for the execution of the plan.

Although we have indicated the extent of the deficit of certain items such as cloth and sugar, we should make it clear that it is not our intention to suggest that the whole of this deficit should be made good by production within this province. We do not advocate

any policy of provincial autarchy. Our object has been to state the broad facts. We may, however, add that we feel that items such as rice, milk, fish, live-stock, education, medical and public health services, housing and road development should be essentially the responsibility of the provinces, the Centre offering, as far as possible, financial and technical assistance. Industry is a subject which, in so far as it may be controlled, should primarily be the concern of the Central Government.

Since this book was written, one of the authors has joined the West Bengal Cabinet. The views represented here are his individual views and have no connexion with his official capacity.

Calcutta
January 1948 }

BIMAL C. GHOSE
BIMALCHANDRA SINHA

PLANNING FOR WEST BENGAL

CERTAIN FACTS ABOUT WEST BENGAL

WEST Bengal is a new province carved out of former Bengal and is one of the unhappy consequences of the division of India. The main picture of the position of West Bengal can be clearly seen from the following facts.

Population and Area. The areas of the two provinces of West Bengal and East Bengal, according to the Radcliffe Award, are:—

West Bengal	... 27,140 sq. miles
East Bengal	... 50,302 ,, ,,

The population of West Bengal, in terms of the Radcliffe Award and of the 1941 census, is 21,211,427. Two factors should however be noted here. We must, first, take into account the normal population growth since 1941. The population growth during the decade 1931-41 was 20 per cent or about 2 per cent every year. Assuming this rate of growth and assuming further that there was no population growth during the two famine years of 1942 and 1943, we may place the total population growth during the period 1941-47 at 10 per cent. Secondly, we must also take into account the exodus of people from East Bengal to West Bengal after partition. It has been estimated by the local authorities that there has been an influx into the town of Nabadwip alone of about 125,000

people from East Bengal. There are reasons to believe that the total number of such immigrants to West Bengal up till January 1948 may be placed in the neighbourhood of one million. In all our calculations therefore we have assumed that the present population of West Bengal is 21,200,000 *plus* 2,100,000 (normal population increase of ten per cent) *plus* 1,000,000 immigrants, or a total of 24,300,000.

Agriculture and Waste Land. According to the statistics given in the *Plot to Plot Enumeration Survey of Bengal, 1944-45*, the province of West Bengal has a total of 9,224,607 acres under paddy (aman, boro and aus); 312,784 acres under gram; 98,305 acres under wheat; 1,075,688 acres under pulses and other food crops; 52,562 acres under sugar cane; 627 acres under groundnut; 135,091 acres under mustard; 11,443 acres under til; 12,712 acres under chillies, 88,751 acres under potato; 20,086 acres under garlic and onions; 755,475 acres under vegetables and others, and 198,889 acres under jute. Area not available for cultivation is made up as follows:—tanks, 576,594 acres; bil, khal, rivers etc., 693,253 acres; roads, paths, bunds etc., 307,041 acres; shops, homesteads, mosques, temples etc., 521,726 acres; others, if any, 851,408 acres; total, 2,950,022 acres.

Area cultivable but not yet cultivated is made up as follows:—cultivable waste, 1,352,628 acres; bhita etc., 116,275 acres; grazing grounds, 119,793 acres; jungles, 270,727 acres; playing and camping grounds, 21,790 acres; others, 43,321 acres; total, 1,924,534 acres.

Other Factors. West Bengal has a total railway mileage of 1931 miles composed as follows: broad gauge, 377 miles; meter gauge, 1536 miles; narrow gauge, 18 miles. She has a navigable waterway of about 550 miles, of which about 420 miles are navigable throughout the year. She has a metalled roadway mileage of 3,500 miles and unmetalled roadway mileage of 38,000 miles. Literacy in West Bengal is about 19 per cent.

OUR REQUIREMENTS

On the basis of the Bombay Plan and 1938-39 prices, an estimate may be made of the aggregate amount of income required to meet the lowest requirements of human life for the people of Bengal. It is as follows:—

		<i>Income required to be spent (Crores of rupees)</i>	
Food	113
Clothing	14
Housing	14
Health & Medicine	10
Education	5
		<hr/>	
<i>Total</i>		...	156, say Rs 160 crores

The aggregate money income required on 1938-39 prices is Rs 160 crores. Prices have since risen, according to the Economic Adviser's Index, by 175 per cent. At present prices, therefore, the aggregate money income required to buy the bare necessities of

life for the people in West Bengal will be Rs 440 crores. As no separate estimate of the national income of West Bengal exists, it is not possible to indicate the extent by which it falls short of the minimum required.¹ And our objective should be not only to assure a minimum subsistence level, but something more for enjoyment of leisure and culture. If we aim at a *per capita* income of Rs 135, the aggregate money income required would be Rs 284 crores at 1938-39 prices and Rs 780 crores at present prices.

¹ An effort was however recently made to assess the national income of West Bengal. Following Dr V. K. R. V. Rao's methods, the following results were obtained:

		In lakhs of rupees (1943-44 prices)	
		West Bengal	East Bengal
1.	Value of Agricultural produce ...	21,192	56,618
2.	Value of Livestock output ...	1,838	3,049
3.	Value of Fishing and Hunting ...	471	1,094
4.	Value of Minerals ...	658	Nil
5.	Value of Forest produce ...	77	167
6.	Income assessed to Income Tax	7,949	1,488
7.	Incomes not assessed to Income Tax:—		
	(a) Industry ...	3,708	1,510
	(b) Trade ...	2,288	2,013
	(c) Transport ...	1,035	560
	(d) Professions and Liberal Arts	718	1,135
	(e) Government salaries ...	278	417
	(f) Domestic servants ...	938	609
Grand Total ...		41,150	68,660
Percentage ...		37.5%	62.5%

This concept of national income may also be expressed in terms of output and services and will then probably be more easily comprehended. This would involve a quantitative estimate of the food, clothing and housing accommodation required and the services of doctors, nurses, teachers etc. needed. A moment's reflection will show that it cannot merely be a question of production of, say, food, clothing, housing accommodation but also of supplying the requirements of such production to where they may be needed and of distributing them, when necessary, to their consumers. Evidently all this involves roads, transport facilities, markets, distributive agencies and so forth.

We now proceed to make a quantitative estimate of minimum requirements.

THE TARGETS IN AGRICULTURE

The broad aims of a national policy in regard to agriculture must be :

- (a) the securing of adequate nutrition for the country's growing population;
- (b) the production of raw materials for the growing industries of the province; and
- (c) the production of raw materials for which, with or without processing, there is an export market.

We first turn to food, which must obviously have the highest priority.

*A. Food Requirement**Rice*

Our total requirement of rice at the rate of 16 oz. *per capita* per day¹ or 3½ seers per week is as follows:

Total population ... 24,000,000

At the rate of 3½ seers per head per

week, the total annual requirement

amounts to about ... 4,000,000 tons

The area under rice cultivation in West Bengal is about 9,450,000 acres. There are no published statistics of *actual* production of rice in West Bengal. An indirect estimate may however be made on the basis of known yield per acre. One difficulty is the different figures of yield per acre according to different authorities. Actual yield appears to vary² from 652 to

¹ The Bombay Plan suggested the following diet from the nutritive standpoint:—

<i>Ounces per day per adult</i>			
Cereals ...	16	Fruits ...	2
Pulses ...	3	Fats & Oils ...	1.5
Sugar ...	2	Whole Milk ...	8
Vegetables ...	6	or Fish, Meat & Eggs	2.3

The diet suggested by the Famine Enquiry Commission (*Report*, Vol. II, p. 106) or by the Bhow Committee (Vol. I, p. 56) is almost similar.

² Figures of yield vary largely. Cf. (a) *Agricultural Statistics 1938-39*, Vol. I, p. 314. Yield of autumn, winter and summer rice during the period 1933-34 to 1938-39—919, 1930, 1181 lb. per acre respectively. (b) *Food Statistics of India* (Government of India publication, 1945). Actual yield of rice per acre in Bengal—771 lb. in 1938-39, 851 lb. in 1939-40, 652 lb. in 1940-41, 923 lb. in 1941-42, 671 lb. in 1942-43, 994 lb. in 1943-44. (c) *Plot to Plot Enumeration Survey, 1944-45*, p. 120 (Government of Bengal publication). General average of the crop cuttings in West Bengal—900 lb. per acre.

994 lb. per acre over the period 1938/39-1943/44. Assuming for our purpose a yield of 900 lb. per acre, the total production of rice in West Bengal may be estimated approximately at 3,700,000 tons. Thus our immediate shortage of rice amounts to 300,000 tons.

The estimated deficit is not a very large one. It is less than 10 per cent of our estimated total production. Production can be increased by either intensive or extensive cultivation.

Dr Burns in his *Report on the Technological Possibilities of Agricultural Development in India*, p. 53, has stated that there can be a maximum increase of 50 per cent through intensive cultivation, as follows:—improved varieties, 10 per cent; better manuring, 40 per cent. But Dr Burns, on a conservative estimate, has placed the figures of average increase at 30 per cent as follows:—improved varieties, 5 per cent; better manuring, 20 per cent. To this should be added another 5 per cent owing to protection from certain pests and diseases. Production can therefore be increased by 30 per cent or by 1,110,000 tons by these methods of intensive cultivation. If this can be achieved, there may be no necessity at all of meeting our food deficit through more extensive cultivation. Yet an estimate may be offered of the possibilities of expanding production by bringing into cultivation cultivable waste land. Cultivable waste land in West Bengal amounts to 1,352,628 acres. The whole of this acreage obviously cannot be utilized for rice cultivation. Although food

must be our first priority, yet the question of other crops such as sugar cane and jute must also be taken into consideration. Assuming that 75 per cent of the total waste land in West Bengal is brought under rice cultivation, this land will yield, on the basis of 900 lb. per acre, about 550,000 tons of rice.

It would be difficult to prepare any accurate estimate of the cost of such intensive and extensive cultivation, but certain approximate estimates may be made. According to Dr Burns, the cost for sulphate of ammonia has been found to be as follows:

1½ mds of ammonium sulphate per one acre, costing

Rs 7-4-0 (experiments during 1936-39)

Increased yield of paddy				
6 mds @ Re 1 11 0 per md	}	Rs 12	13	0
Increased yield of straw			increased	
14.8 mds @ Re 0 3 0 per md			profit	
Therefore, increased net profit per acre	...	Rs 4	9	0

Experiments conducted in Bengal show that for 405,000 acres, the requirement of sulphate of ammonia is 15,000 tons and the extra produce of *paddy* is 30,000 tons. In other words,

1. Requirement of ammonium sulphate ... 1 md per acre
 2. Cost of ammonium sulphate
@ Rs 10 per md ... Rs 10 0 0
 3. Increased yield of paddy 2 mds per acre
 4. Price of 2 mds of paddy
@ Rs 7 per md Rs 14 0 0
 5. Price of 5 mds of straw
@ As 3 per md Re 1 0 0
- | | | | |
|-------------------------------|-----|-----|----------|
| Increased net profit per acre | ... | ... | Rs 5 0 0 |
|-------------------------------|-----|-----|----------|

But ammonium sulphate may however be replaced by other manures, such as bonemeal, phosphate of ammonia, oil-cake, town compost, town sludge, village compost, green manures and so on. The quantity required in the case of these manures will vary according to their nitrogen content. This question is of great importance, as the requisite quantity of ammonium sulphate is not available at present. If the total area of 9,225,000 acres that is now under rice cultivation has to be thus manured, the cost will be Rs 922.5 lakhs, increased yield of *paddy* will be 690,000 tons or of *rice* (at the ratio of 8:5) 430,000 tons on the basis of experiments conducted in Bengal, and the net profit to agriculturists Rs 461.25 lakhs.

In view of the absence of necessary data it is not possible to calculate the cost of the extension of cultivation if that has to be undertaken.

Milk and Livestock

Milk. From the cattle census for 1940, the following figures in respect of West Bengal are available:—

	No. of females	No. of males
Cattle	3,914,120	4,193,484
Buffaloes	169,848	307,273
Goats	2,549,799	
Sheep	357,484	

In Dr Burns's *Report on the Technological Possibilities of Agricultural Development in India*, the milking capacity per head per annum in Region I (which covers Bengal) has been given as—cattle

3706 lb.; buffaloes 7326 lb. On that basis, the total annual milk production will be 1,450,572,872 lb., or 17,689,913 mds for cattle and 124,403,649 lb., or 1,557,477 mds for buffaloes or a total of 19,207,360 mds per annum.

Our requirement may be calculated as follows:— Total population of West Bengal is 24 million, of which adults constitute about 80 per cent or 19,200,000 and children 20 per cent or 4,800,000. Of the adult population, about 8 per cent constitute nursing and expectant mothers. Dr Aykroyd and other authorities have prescribed 1 lb. of milk per day for children and nursing and expectant mothers and $\frac{1}{2}$ lb. per day for others. On that basis, our total requirement comes to 65,722,721 mds per annum, while our supply is only 19,207,360 mds per annum, thus leaving a deficit of 46,515,361 mds per annum.

Two points should be noted in this connexion. It is well known that during recent years there has been much slaughter of livestock and also natural death as a result of famine, flood and other natural calamities. There has also been some export of cattle to East Bengal after partition. The number of cattle is really far less at the present moment than that shown in the 1940 census and the deficit, correspondingly, much greater. Secondly, some milk is required for manufacturing purposes as well. It was estimated that the requirement for manufacturing purposes (including Indian sweets) in Calcutta was 1130 mds per day or 414,450 mds per annum (vide p. 4 of the *Report on the Survey of Milk Supply Position of Calcutta, 1945*,

Government of Bengal). If we take into account these two factors, we shall find that the deficit is really much greater than 46 million mds per annum.

Assuming, however, for the present that the deficit is about 46 million mds per annum, we shall have to increase our milk supply $3\frac{1}{4}$ times. If we have to depend entirely on cattle, that will mean, at the present rate of yield, another 99,325 milch cows or, if we have milch cows and she-buffaloes at the existing ratio, our requirement will be, at the present rate of yield, another 11,344 milch cows and 22,022 female buffaloes. But as we have stated above, the required increase in their number would be higher.

Bulls. The figures quoted above regarding male cattle or buffaloes include both bulls and bullocks. It is estimated that the total number of bulls in West Bengal is 42,277, which means that a bull has to cover 92 cows. Normally one bull is considered adequate for 50 to 60 cows. It is however doubtful if the bulls are kept for stud purposes only. It is more probable that the bulls are made to serve the dual purpose of stud as well as draught. This indicates a shortage in this direction. Artificial insemination can go a long way to solving this shortage. There should be an increase of at least 30 per cent or 12,668 bulls.

Bullocks. According to Dr Burns, the capacity for work per pair of bullocks in Region I (which covers Bengal) is 7·6 acres cultivated. Total cultivated area in West Bengal is 11,377,044 acres. Our total bullock requirement therefore, on Dr Burns's basis, is 1,496,979 pairs. If we deduct the number of bulls (42,277) from

the total number of males (4,193,484), the number of existing bullocks, on the basis of 1940 census, will be 4,151,207 heads or 2,075,603 pairs. On the basis of 1940 census therefore there is a surplus of bullocks to the extent of 578,624 pairs. It should only be added that the position has materially changed since 1940 and the surplus, on the basis of 1940 figures, may have now turned into a deficit.

Fish

On the basis of $\frac{1}{4}$ lb. of fish per day per head in terms of adult population, the optimum requirement of West Bengal is about 5,000,000 lb. per day or 2,225,700 mds per annum. Contrasted with this figure of *optimum* requirement, we have the figures of *actual annual* offtake as follows:

	<i>Fresh Fish mds</i>	<i>Dry Fish mds</i>	<i>Total mds</i>
(a) Sunderbans ...	250,000	206,000	456,000
(b) Bheries near Calcutta	50,000	nil	50,000
(c) <i>Jiol</i> fish brought to Calcutta by boats ...	50,000	nil	50,000
(d) Exports to Calcutta from Midnapore and Howrah ...	25,000	4,000	29,000
(e) Rest of West Bengal	630,560	nil	630,560
<i>Total</i> ...	1,005,560	210,000	1,215,560

West Bengal consumes very little dry fish and the entire production of dry fish is sent to Chittagong or to Burma. The actual position about fish, therefore, is as follows:—

		<i>mds</i>
1. Production of fresh fish in West Bengal ...		1,005,560
2. Net imports from East Bengal, via—		
(i) Goalundo Section	188,000 mds	} 220,000
(ii) Serajganj Section	30,000 „	
(iii) Rajshahi Section	2,000 „	
	220,000 mds	
3. Net imports from Bihar	20,000
4. Net imports from Orissa	70,000
	<i>Total</i> ...	1,315,560

Assuming that supplies from East Bengal will not be available, we arrive at the following conclusions:—

1. Total supply at present ...	1,095,560 mds per annum.		
2. Total actual offtake ...	1,315,560 „ „ „		
3. Total optimum requirement	2,225,700 „ „ „		
4. Shortage on the basis of the present actual offtake ...	220,000 „ „ „		
5. Shortage on the basis of optimum requirement ...	1,130,140 „ „ „		

Fodder Crops

Before we pass on to other requirements, an estimate may be made of fodder requirements in West Bengal. Dr Burns in his Report has calculated the daily requirement per head of bovine population in terms of adults as follows:—Average live weight, 500 lb.; roughages, such as special fodder crops (dry) or grass (dry) or straw, 11 lb. dry; concentrates such as cakes, seeds, bran and pollard, 0.5 lb. Converted in terms of acreage necessary to produce this amount of fodder it is estimated that $\frac{2}{3}$ acre is the minimum necessary per head of adult bovine population while

1 acre is a liberal estimate. On this basis, an area of 5,763,150 acres is required for the present bovine population and 5,829,366 acres for an optimum bovine population of 8,744,050. Any quantitative estimate of our present fodder output is difficult to make in the absence of necessary figures, but a rough idea can be made. Assuming that 2 mds of paddy yield 5 mds of straw, the total output of straw in West Bengal would be 415,107,315 mds per year. It is not known however what proportion of this straw is used as fodder and what proportion as building material. It is also not known what proportion of the pulses grown here are used for human consumption and what proportion as fodder. But it is understandable that when it is not possible to provide for a live weight of 500 lb. per adult cattle per day, it will be necessary to compensate by providing for more roughages and concentrates. Published statistics being extremely inadequate and unsatisfactory, even an approximate estimate of the deficit, if any, and of the extent of the necessary increase in the supply of fodder must wait until such time as a more thorough investigation is made.

B. Industrial Raw Materials

We have tried to make an estimate of our food requirements. But, as already indicated at the beginning, the object of agricultural development should be, not only to produce adequate nutritive food for the country's growing population, but also to produce necessary raw materials for the country's growing

industries. We shall have to examine in this connexion the possibilities of jute and sugar cane.

Jute. West Bengal has also to settle her plan about jute growing and the jute industry. The position, on the basis of 1946 figures, was as follows:

	<i>In 1000 acres</i>	<i>Jute acreage % of Bengal Total</i>	<i>% of All-India Total</i>	<i>In lakh bales</i>	<i>Jute production % of Bengal Total</i>	<i>% of All-India Total</i>
1. Western Bengal	133	7.9	6.0	342,000	7.9	6.2
2. Eastern Bengal	1377	92.1	73.2	4,139,000	92.1	75.2
3. Total Bengal	1510	100.0	79.2	4,481,000	100.0	81.4
4. Bihar ...	145	6.0	7.7	251,000	—	4.6
5. Orissa ...	24	—	1.3	58,000	—	1.0
6. Assam (excluding Sylhet) ...	162	—	8.6	407,000	—	7.4
7. Total Indian Union ...	444	—	23.6	1,058,000	—	19.2
8. Total Eastern Bengal and Sylhet ...	1400	—	74.5	4,214,000	—	76.6
9. Others ...	36	—	0.9	278,000	—	4.2
10. Total India ...	1880	—	100.0	5,550,000	—	100.0

It may be noted in this connexion that in 1940, that is before the introduction of the jute restriction scheme, the area under jute in West Bengal was 391,000 acres and the production was 904,000 bales. (Total jute production of the Indian Union that year was 2,314,000 bales.) It is estimated that the maximum capacity of the jute mills, all of which are situated in West Bengal, is 6 million bales a year. It is further estimated that the essential need of the Indian Union may be fixed at 3 million bales a year. It will

be seen from the above table that the total production of jute in the Indian Union in 1946 amounted to 1,058,000 bales and that of West Bengal was 342,000 bales as compared to 2,314,000 bales and 904,000 bales respectively in 1940. This means that, if the restriction on jute growing is withdrawn, West Bengal has the potentiality of growing at least 904,000 bales a year, if not more. But the question would be whether or not the land may be more necessary for growing food crops which obviously must have the highest priority. If it is possible to meet the deficit in our food-requirement by intensive cultivation alone, without bringing fresh land under food crops, only then may it be possible to release land for the cultivation of jute. Moreover, two other questions should also be considered in this connexion, viz (1) whether it would be right to proceed on the assumption that East Bengal jute will be totally denied to West Bengal and (2) whether for the next few years food crops are likely to fetch as much money, if not more, as jute if we have any surplus to sell. Whether it would be feasible and desirable to increase jute acreage would therefore depend on these three factors.

Sugar cane. The maximum productive capacity of sugar factories in West Bengal is 9,000 tons per annum, while actual production does not exceed 4,000 tons per annum. The optimum requirement is 6 lb. per head per annum. The total requirement for a population of 24 million is therefore 64,000 tons per annum. There is thus a large deficit in our requirement of sugar. A very large increase in sugar cane

cultivation is necessary not only for purposes of food but for yet another important reason. West Bengal is extremely deficient in the production of alcohol and rectified and methylated spirits. Increase in sugar cane cultivation is essential from this point of view as well.

C. Exportable Crops

The third objective of agricultural development is to produce, in addition to food and raw materials, exportable cash crops if possible. Situated as we are, we cannot at present plan for the cultivation of exportable cash crops before we can achieve our targets in food and raw materials. Moreover, food itself is, at the present moment, the best possible commercial crop. If we grow surplus food it will serve the same purpose as that of commercial crops equally well, if not better.

CERTAIN OTHER FACTORS IN CONNEXION WITH AGRICULTURE

There are also certain other factors that should be taken into consideration in this connexion. For the successful execution of the above targets, it is important to introduce fundamental changes in the whole agricultural complex. Agriculture is not only an occupation but a complete way of life. Fundamental changes will be necessary before we can be successful in our agricultural development plans. In this context the following deserve particular attention:

(i) *Price.* The stabilization of the price of agri-

cultural commodities at an economic level is essential. As agricultural prices occupy the key position in the whole price-structure, we shall have to stabilize agricultural prices at such a level as will be equitable to both growers and consumers and also ensure economic adjustment amongst the price-levels of raw materials, manufactures and so on.

(ii) *Reform of land tenure.* This is a pressing problem and demands immediate solution. The ultimate responsibility for agricultural development now rests virtually on the poorest tenant who is the most ill-equipped person for the purpose. Unless there is a fundamental change in the present system of land tenure by abolishing all rent-receivers, conditions cannot be created for agricultural planning and development.

CLOTHING

The Bombay Plan assumed 30 yards *per capita* per annum as the minimum requirement for clothing. For a population of 24 million, the total requirement amounts to 720 million yards per annum. Thirty yards per head, however reasonable or desirable, appears to be rather too much to aim at under present circumstances. The Post-War Planning Committee on Textiles, popularly known as the Khatau Committee, assumed Bengal's *per capita* requirement as 16·5 yards per annum. On this basis, the total requirement for a population of 24 million in West Bengal is about 400 million yards.

The production of undivided Bengal was about

200 million yards of mill-made cloth and 162 million yards of hand-loom cloth. The share of East Bengal in respect of this production is known to be a little less than 25 per cent of mill-made cloth and 66 per cent of hand-loom cloth. West Bengal's production therefore amounts to about 155 million yards and 54 million yards respectively of mill-made and hand-loom cloth or a total of about 210 million yards. The present deficit is therefore 190 million yards. The Khatau Committee had estimated on the basis of deficits a *pro rata* allocation of 495 million yards to the Bengal (including Assam) deficit zone from the surplus available. This allocation will of course be revised now in view of the fact that the estimated deficit in West Bengal is much lower than 495 million yards. If the allocation meant for the Pakistan area is now cancelled, then West Bengal should be entitled to an allocation of about 130 million yards from surplus available on a *pro rata* basis, so that the net deficit of West Bengal may be estimated at 60 million yards.

Undivided Bengal had obtained an allocation of 125,000 fine and 200,000 coarse spindles. Out of these 325,000 spindles, it appears that not more than 75,000 spindles are accounted for by the mills in East Bengal. Thus about 250,000 spindles are expected to remain in West Bengal. If we assume that of these spindles 90,000 are fine and 160,000 coarse, the calculated production of cloth from these additional spindles is about 163 million yards. When all these new spindles allocated to West Bengal start production there should

be no deficit in the total requirement of cloth on a basis even somewhat more generous than 16·5 yards *per capita* per annum.

[Compare the following figures. According to the calculations of Mr M. P. Gandhi (vide his *Cotton Textile Annual*, 1945-46, p. 82) one power loom can consume, *at the most*, 8,100 lb. of yarn per year. The *Fact Finding Committee (Hand-looms and Mills)* has come to the conclusion that 1 lb. of yarn = 4·57 yards of hand-loom cloth or 4·78 yards of power loom cloth (p. 55 of the Report). On this basis, the *maximum* production of a power loom per year comes up to $8,100 \times 4\cdot78 = 38,718$ yards of cloth. According to Mr Gandhi, the total number of power looms installed in 1945/46 in West Bengal was 8,621. The maximum production, on the above basis, is 333·7 million yards. But, as is well known, actual production falls far short of the maximum possible production. Riots, labour trouble etc. accounted for a loss of 700 million yards in India in 1946, as admitted by Shri Rajagopalachari, the then Industry and Supply Minister in the Central Assembly.]

The bottlenecks in this matter are machinery to be imported from abroad and cement and steel for necessary constructional purposes.

MEDICAL AND PUBLIC HEALTH SERVICES

The main object of the plan formulated by the Health Survey and Development Committee 1946, popularly known as the Bhore Committee, was to provide, besides the organization of the administration

at the Centre and the provinces, a district health organization. According to that scheme, a figure of three millions has been taken to represent a district and the plan has therefore been called the 'Three Million Plan'. A three million district will consist of 150 primary units, each having, on an average, a population of 20,000. About 30 of these primary units can suitably be included in a secondary unit so that the district will have five such units. The strength of staff and hospital accommodation would be as follows:

	<i>Controlling Medical Officers</i>	<i>Other Medical Officers</i>	<i>Non-Medical Officers</i>	<i>Hospitals</i>
1. Primary Unit	1	5	78	75 beds
2. Secondary Unit H.Q.	1	139	358	650 „
3. District H.Q.	1	268	1398	2500 „
<i>Total</i>	3	412	1834	3225 beds

On the basis of this long term plan, the requirements of West Bengal will be 24 controlling medical officers, 3,296 other medical officers, 14,672 non-medical officers and 25,800 beds.

But the Bhoze Committee felt that pending the execution of this long term plan, there must be a short term plan which can be put into operation immediately. The short term plan is exactly on the lines of the long term plan, the only difference being that it starts with a lesser number of beds and doctors at each stage. The population that will have to be served by each primary unit under the short term plan will be 40,000 instead of 20,000 of the long term

plan. Beds will be gradually increased to the ultimate limit of the long term plan. Details of this short term programme are given in Chap. IV, Vol. II of the Bhore Committee's Report.

The estimated cost of implementing the short term plan was calculated by the Committee as follows:

	<i>First five years</i>	<i>Second five years</i>	<i>First ten years</i>
Recurring plus Non-recurring annual <i>per capita</i> expenditure.	Re 1 4 0	Rs 2 7 0	Re 1 14 0

On the above basis, the total estimated recurring and non-recurring cost for each year during the first five year period is Rs 3 crores, and for each year during the second five year period 5.85 crores or a total of Rs 44.25 crores for the first ten years.

An idea of the present position regarding doctors and hospitals may be had from the following table:

WEST BENGAL					
<i>Hospitals</i>	<i>No. of Beds</i>			<i>Doctors</i>	
	<i>Male</i>	<i>Female</i>	<i>Total</i>		
1. State public	1858	1161	3019	682	(in 9 hospitals)
2. A.G. & F.R.E. ¹ Hospitals *	—	—	6150	220	(in 166 A.G. & F.R.E. hospi- tals)
3. Non-Govern- ment	1808	1769	3577	Not known	
4. Provincialized	988	525	1513	901	(in 34 Provin- cialized hospi- tals)

¹ Auxiliary-Government & Famine Relief Emergency.

As the Bhore Committee had no idea of banning private practice, we have not estimated the probable number of private practitioners. The requirements laid down in the Bhore Committee's Report are therefore in addition to the number of private practitioners.

EDUCATION

Extreme forms of poverty will prevail amongst the masses in India so long as the overwhelming majority of the Indian people are able neither to read nor write. A general onslaught on ignorance and illiteracy will pave the way for improvement in the standard of living in other walks of life and must therefore be given a very high priority.

The primary requisite of any system of public education in a democracy is that it should provide for all its members, and not for a few only, at least such training as may be necessary to make them reasonably good citizens. This envisages free and compulsory education of some kind. It may be mentioned that the two Committees on Basic Education set up by the Central Advisory Board of Education in 1938-39 had presented that the age-range for compulsory school education should be from six to fourteen.

In any question of educational reform, the form or content of education is more important than the machinery, though the question of machinery is also

of great importance. Different authorities disagree as to the exact contents of education that should be imparted at the different stages. The Wardha scheme for Basic Education, the Sargent scheme, the Abbott-Wood scheme for Technical Education—none of these schemes see eye to eye on all points regarding the form and content of education. It is not possible here to enter into the merits or otherwise of the different schemes and a thorough scrutiny of these different schemes may best be left to an expert committee. But, proceeding for our purpose on the Sargent Committee's Report, we may arrive at certain estimates which will not materially vary in case of any modification in the light of the other schemes.

The Sargent Committee reported that basic (primary and middle) education should embody many of the educational ideas contained in the original Wardha scheme, although it would differ from it in certain particulars. Basic education, according to the Sargent scheme, will consist of two stages—the junior or primary stage covering a period of five years from the age of six to eleven, and the senior or middle stage covering three years from the age of eleven to fourteen. The function of the high school will be to cater for those children who are well above the average in ability. The high school course is to cover six years from about the age of eleven. What is envisaged is that pupils at about the age of eleven plus should, on completion of the fifth class of the junior basic (primary) schools be directed either to the senior basic

(middle) school or to the high school according to their abilities, aptitudes and general promise. Both the senior basic school and the high school must each be regarded as providing a course complete by itself.

The function of technical education, as pointed out by the Technical Education Committee of the Central Advisory Board, is twofold: (a) to meet the needs of industry and commerce by providing properly trained workers of all grades and (b) to provide a suitable form of education for boys and girls whose natural abilities can best be developed by instruction on practical lines. Agricultural education should be regarded as an essential branch of technical education. It would be desirable for senior basic (middle) schools as also high schools to have an agricultural bias, especially in rural areas. In order to provide suitable training and instruction for different types of workers, the Technical Education Committee recommended that there should be the following main types of technical institutions: (a) junior technical or industrial or trade schools, (b) technical high schools, (c) senior technical institutions. Categories (a) and (b) will normally provide full-time instruction preparatory to employment while (c) will also provide part-time instruction for those already in employment.

The gross recurring cost of providing the minimum educational needs may, according to the calculation in the Sargent Report, be estimated as follows:

WEST BENGAL

		<i>Crores of Rupees</i>
Basic Education (primary and middle)		13·0
Pre-primary Education		0·25
High School Education		5·0
Technical Education		0·75
Training of Teachers		0·5
<i>Total</i> ...		19·5 or say 20 crores

Twenty crores of rupees will be the gross annual expenditure for providing minimum educational needs when the scheme is in full operation. To arrive at the *net* figure, incomes from fees etc. should be deducted. The gross annual expenditure will have to be incurred on the salary and allowances of teachers and expenditure on loan charges, school medical service, furniture, equipment, administration, repair of buildings and furniture etc. *It does not include the cost of school buildings and other structures that may be necessary.* According to the calculations of the Bombay Plan, which assumes pre-war prices, the cost of school buildings for basic education above may be estimated at about 75 lakhs. At pre-war prices, the cost of buildings for other purposes may be placed at 25 lakhs. Construction costs, estimated at pre-war prices at 1 crore, would now cost about 3 crores.

Our total non-recurring cost amounts therefore to about 3 crores and *gross* recurring cost, when the scheme is in full operation, to about 20 crores. The Sargent Report assumed that it would take forty years

to give full effect to the scheme. This is too long a period and our objective should therefore be to complete it in three five-year periods.

Our requirement of teachers is about 150,000 made up as follows: junior basic, 85,000; senior basic, 40,000; high school, 25,000.

ROAD DEVELOPMENT

An extensive plan for road development was formulated as part of the Post-War Reconstruction Programme in Bengal. The plan was for twenty years, but it included a short term plan for the next five years also.

The position after the partition is as follows:

<i>Category</i>	<i>Miles</i>	<i>Cost per mile</i>	<i>Approximate expenditure</i>
First five year programme			Rs
National Highway	298 @	Rs 145,000	43,210,000
Provincial Highway	586 @	— do —	84,970,000
Major District Roads	534 @	Rs 120,000	64,080,000
Other District Roads	101 @	Rs 80,000	8,080,000
Village Roads	10 @	Rs 20,000	200,000

Total Rs 200,540,000
say, Rs 20.05 crores

Twenty years programme			
National Highway	620 @	Rs 145,000	89,900,000
Provincial Highway	1054 @	— do —	152,830,000
Major District Roads	2766 @	Rs 120,000	331,920,000
Other District Roads	2706 @	Rs 80,000	216,480,000
Village Roads	6032 @	Rs 20,000	120,640,000

13,178

Total Rs 911,770,000
say, Rs 92 crores

The total cost on capital outlay is Rs 92 crores, of which Rs 20 crores is the cost of the first five year programme. To this should be added the recurring expenditure on repairs, etc. The obvious bottlenecks are scarcity of road building materials, such as coal for brick-burning, steel, cement, etc., and of road building machinery such as rollers, etc.

HOUSING

Housing must have priority in any scheme of development. An estimate of requirements is, however, extremely difficult as relevant statistical material is very meagre. The Bhore Committee (Vol. II, p. 234) observed: 'Without further data than are now available, it is not possible even to hazard a guess as to the extent of new construction necessary for providing housing accommodation of a reasonable standard for the existing population. A definition of what that standard should be would influence the estimate of the number of new houses required, because a large percentage of existing houses would be condemned as unfit for human habitation by any reasonable standard, and another large percentage would require extensive improvement before they can reach the required standard.' The Committee further added: 'During the ten years from 1931 to 1941 the population of the country, as a whole, increased by 50 millions or about five millions annually. In the absence of reliable statistics, even a rough estimate of the number of houses required for the country, taking into consideration the rate of population growth, the

death rate and other factors, is almost impossible. There are also social changes which affect the housing problem. The disintegration of the joint-family system, which will increase in tempo with industrialization, and a rise in the standard of living, may well result in a demand for housing accommodation not less pressing than that caused by the growth of population.' The number of houses for the purpose of the census and recorded in the census reports is no indication in this matter.

The Bombay Plan estimated that if we are to provide 100 sq. ft. of house room per person, the average house should have an area of at least 500 sq. ft., so that it can accommodate five persons. In rural areas, the cost of building such a house was, at pre-war prices, assumed to be Rs 400 and in urban areas, on the same basis, twice as much. The maintenance cost was estimated to be about $7\frac{1}{2}$ per cent of the total capital expenditure. The construction cost, however, has increased by about 300 per cent now as compared with pre-war prices, particularly in regard to pucca structures. Our requirement of houses is as follows:

Population of West Bengal	...	24,000,000
of which the urban population		
is approximately 30 per cent	or about	7,200,000
and the rural population		
approximately 70 per cent	or about	16,800,000

(N.B. The proportion of urban population, according to the 1941 census, was about 22 per cent in West Bengal. As there has been a very large influx into

towns since then we have assumed 30 per cent to be the proportion of urban population in West Bengal.)

Assuming that each house is to accommodate five persons, we require 1,440,000 houses for our urban population and 3,360,000 houses for our rural population. On the basis of the Bombay Plan, the construction cost for 1,440,000 urban houses would be Rs 115.2 crores; but at present prices the cost would probably be about Rs 350 crores. The construction cost for 3,360,000 rural houses @ Rs 400 per house would be Rs 134.4 crores. The maintenance charge @ $7\frac{1}{2}$ per cent would be, for both the categories, Rs 18.75 crores per annum on the basis of construction cost assumed in the Bombay Plan. At present day prices this cost will, in fact, be much higher.

The above figures will of course be true *if we have to construct all houses afresh*. But that is not a fact. Our net requirement can be worked out if we can have figures about the present housing accommodation and an estimate of what net increase in house-space is necessary. In the absence of such figures and estimates it is not possible to work out what *net* expenditure is necessary.

THE REQUIREMENTS RESTATED

We have tried above to make an objective factual assessment of our requirements in certain basic items and we have considered our targets in food, clothing, medical and health services, education, road transport and housing. We have arrived at the following estimates:

	<i>Requirement per annum</i>	<i>Present supply per annum</i>	<i>Deficit per annum</i>
1. Food			
(a) Rice	4,000,000 tons	3,700,000 tons	300,000 tons
(b) Milk	65,723,000 mds	19,207,000 mds	46,516,000 mds
(c) Fish	2,226,000 mds	1,100,000 mds	1,126,000 mds
(d) Sugar	64,000 tons	4,000 tons	60,000 tons
(e) Livestock			
<i>Cattle</i>	4,183,293 (Total re- quirement)	4,083,968 (Total supply)	99,325 (Total deficit)
<i>Bulls</i>	54,845 (Total re- quirement)	42,227 (Total supply)	12,668 (Total deficit)
<i>Bullocks</i>	2,993,458 heads or 1,496,979 pairs (Total requirement)	4,150,207 heads or 2,075,603 pairs	578,624 Surplus pairs
(f) Fodder			
Crops	No accurate estimate possible.		
2. Clothing	400 million yds	210 million yds	190 million yds
3. Medical and Public Health Services	4.42 crores ¹		
4. Education	20 crores ²		
5. Road Develop- ment	13,178 miles of all categories of new roads (in addition to existing roads) at a cost of Rs 92 crores, to be spread over 20 years		
6. Housing	1,440,000 urban houses and 3,360,000 rural houses (from which should be deducted the number of existing serviceable houses). Approximate total cost on capital outlay will be Rs 250 crores on the basis of construction cost assumed in the Bombay Plan, (from which should be deducted the value of existing serviceable houses) and the annual maintenance cost at about 7½ per cent or about Rs 18.75 crores.		

¹ Total cost for first ten years is Rs 44.25 crores on the basis of the number of medical men, nurses, beds etc. suggested in the short term plan of the Bhore Committee.

² Twenty crores will be the gross recurring annual cost when the scheme will be in full operation. As the scheme is proposed to be completed in 15 years, this cost will be much less during the earlier years. The non-recurring cost is likely to be about Rs 3 crores.

CERTAIN OTHER CONSIDERATIONS

Industrial Development

We have so far confined ourselves to a discussion of certain essential requirements for ensuring a better living standard. These again are requirements in the provision of which Government will have to shoulder considerable responsibility. In this sense, industry stands in a somewhat different category. There is, of course, much that the Provincial Government can do in helping cottage industries to develop on sound lines. Their scope of activity in respect of large industries is or should be limited. For one thing, such control as may be exercised over them comes more appropriately under the competence of the Central Government. For another, the finances that may be available to the provinces for developmental purposes would be extremely inadequate for the provision of even the most essential requirements. For yet another, private enterprise can be relied upon to develop the large industries. Immediately, in the industrial sphere, the Provincial Government should not aim at anything more than nationalizing essential utility services like transport, electricity, gas etc.

Finances

No accurate estimates of the revenue and expenditure of West Bengal are yet available. A careful allocation of the total revenues and expenditure of undivided Bengal into West Bengal and East Bengal would appear to yield the following results: *revenues*

—West Bengal 60 per cent, East Bengal 40 per cent; *expenditure*—West Bengal 50 per cent, East Bengal 50 per cent. On this basis, the surplus from revenues that may be expected in West Bengal on the existing basis of revenue and expenditure is between Rs 4 and 6 crores per annum to be used for financing development projects. Stricter economy in governmental expenditure, tightening up the administration of sales tax with the object of preventing evasion, and exploration of certain new sources of revenue may augment this surplus by anything between another Rs 4 to 5 crores. As against this must be set increased expenditure under the heads 'Security' and 'Rehabilitation', particularly in connexion with immigrants from East Bengal. How much of this cost can be obtained from the Central Government is problematical. But it need hardly be emphasized that the West Bengal Government must exert the utmost pressure on the Central Government for liberal financial assistance for expenses to be incurred for security, rehabilitation and developmental purposes. At the same time, it would be difficult to count too much upon such assistance on any adequate scale in reference to our needs, in view of the present position of Central Government finances, particularly as a result of defence and rehabilitation and relief expenditures.

It would appear that something between Rs 5 to 7 crores may be available out of revenues for developmental expenditure. Help from the Centre and borrowing are the only other sources for obtaining funds. The money market at the moment is not

favourable for raising big loans. There is therefore little doubt that funds that may be available for development purposes would be meagre in relation to our needs. In this context, the question of priorities assumes exceptional importance. Careful planning so as to utilize our comparatively small financial resources to the best possible advantage of the province is our prime requirement.

Planning Machinery

We do not intend to dilate on the importance of an adequate planning machinery nor, in this brief memorandum, describe the planning organization of certain Western countries including Russia. We would only emphasize the absence of any satisfactory planning machinery in this country. Until recently the Central Government had a separate Planning and Reconstruction department but it has recently been abolished and its task assigned to other departments. In the provincial sphere, the Bengal Government had a Development branch under the Chief Minister and there was a Development Board consisting mainly of departmental secretaries. This department was really an adjunct of other departments with the result that no tangible progress was recorded in developmental matters. It is essential that a separate Development department should be set up and placed in charge of an independent minister. An advisory committee of experts consisting of non-officials and, if necessary, officials should be associated with this department.

The question of deciding on priorities must also be the concern of this department. It should have the responsibility of so allocating scarce raw materials, available technical personnel and funds between competing demands that the largest contribution is made towards the realization of our objective, namely the raising of the standard of living of our masses.

